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Title: GRB 081029: A Step Towards Understanding Multiple Afterglow Components
Co-Authors: Massimiliano De Pasquale, Jirong Mao, Taka Sakamoto, Patricia Schady, Stevano Covino, Paolo D'Avanzo, Angelo Antonelli, Valerio D'Elia, Guido Chincarini, Fabrizio Fiore
Abstract: We present an analysis of the unusual optical light curve of the gamma-ray burst GRB 081029 at a redshift of $z = 3.8479$. We combine X-ray and optical observations from {\sl Swift\/} with optical and infrared data from REM to obtain a detailed data set extending from $\approx 10^2$~s to $\approx 10^5$~s after the BAT trigger, and from 10~keV to 16\,000~\AA. The X-ray afterglow showed a shallow initial decay followed by a rapid decay after about 18\,000~s. The optical afterglow, however, shows an uncharacteristic rise at about 5000~s that has no corresponding feature in the X-ray light curve. The data are not consistent with a single-component jet. It is possible that there are multiple physical components contributing to the afterglow of GRB~081029.

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